

FIG. 1A

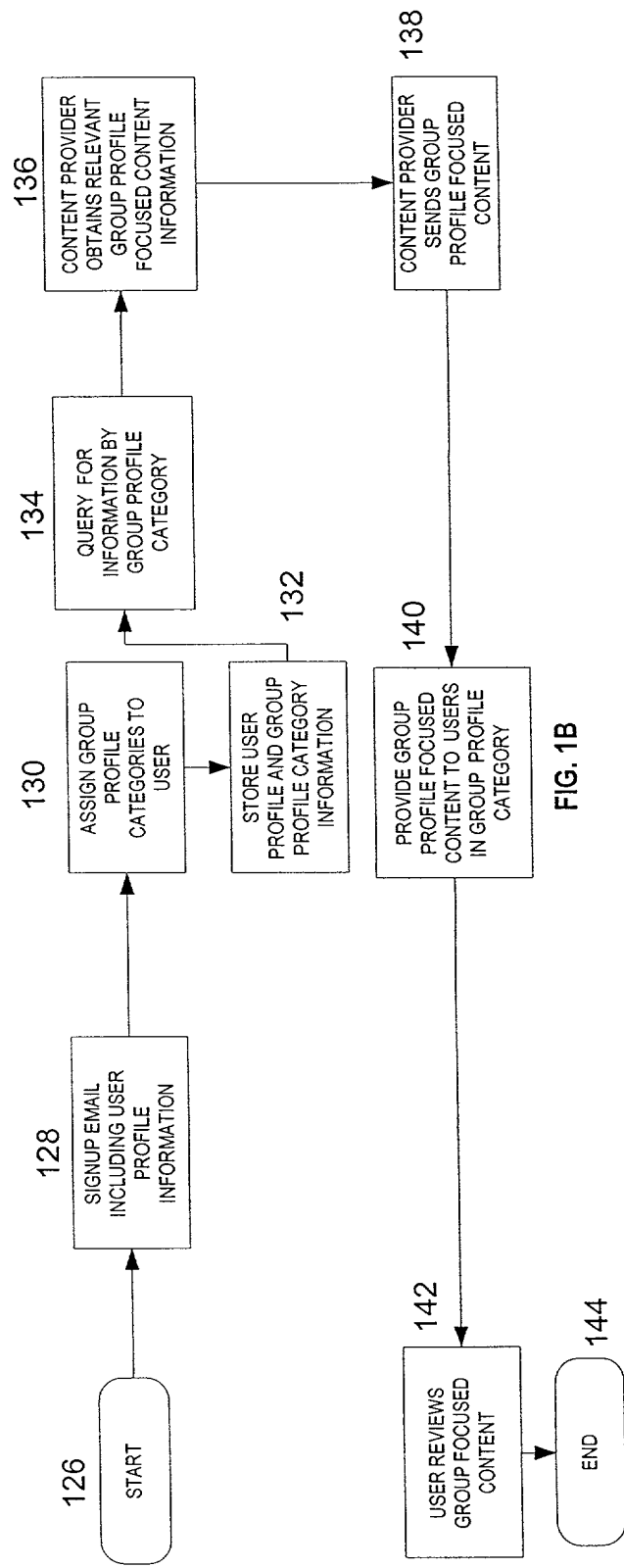


FIG. 1B

FIG. 1C is a block diagram of a system architecture for a web application. The system includes a web server (150a) connected to a load balancer (154) and a firewall (152). The load balancer and firewall are connected to a network (150). The network is connected to a plurality of computer systems (148a, 148b, 170a, 170b). Each computer system includes a browser (168a, 168b, 172a, 172b). The computer systems are connected to users (102a, 102b) and associates (208a, 208b). The web server (150a) is connected to an application server (158a) and a database (164). The application server (158a) includes a personal information report system application (160) and a database management system (162). The application server (158a) is connected to a database (166).

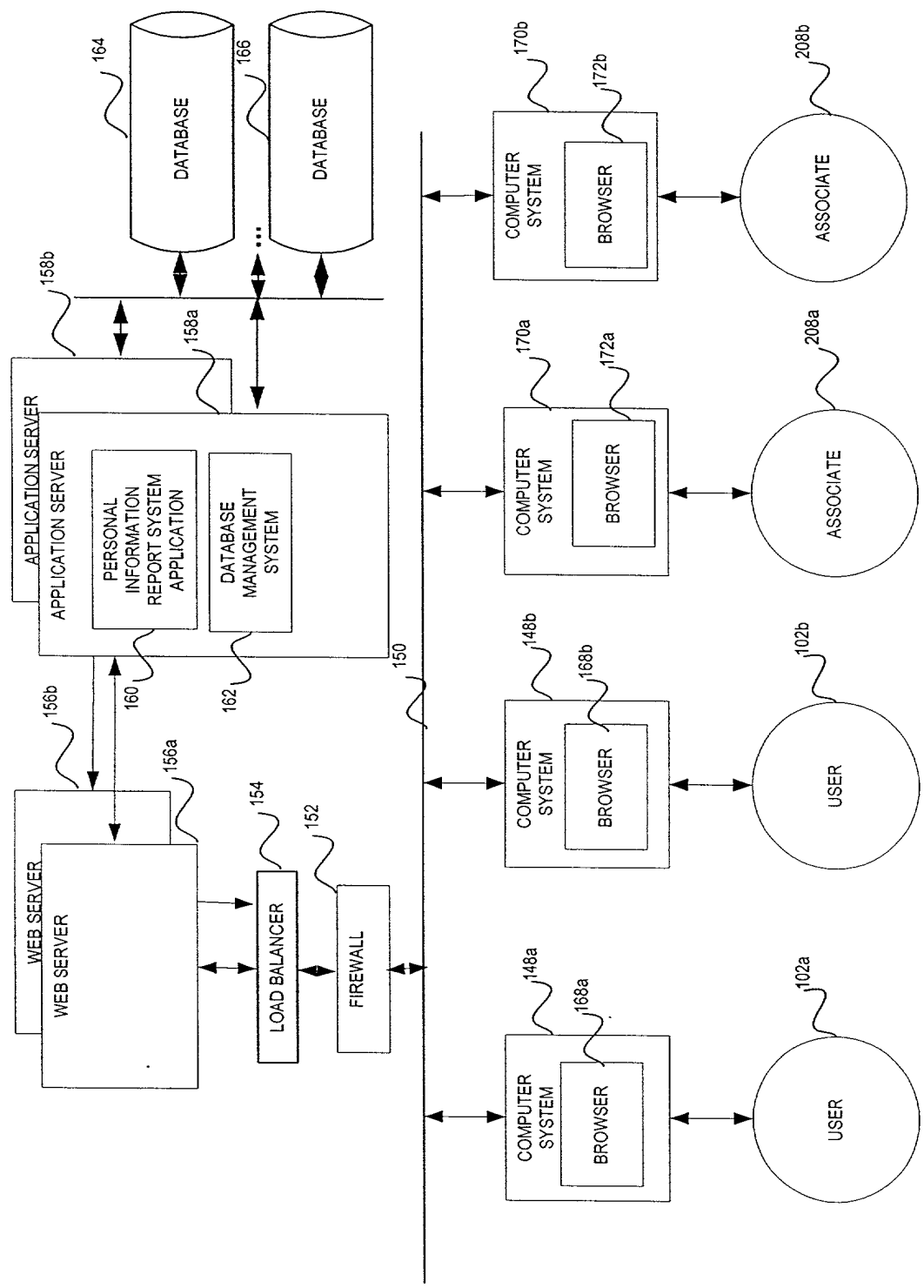


FIG. 1C

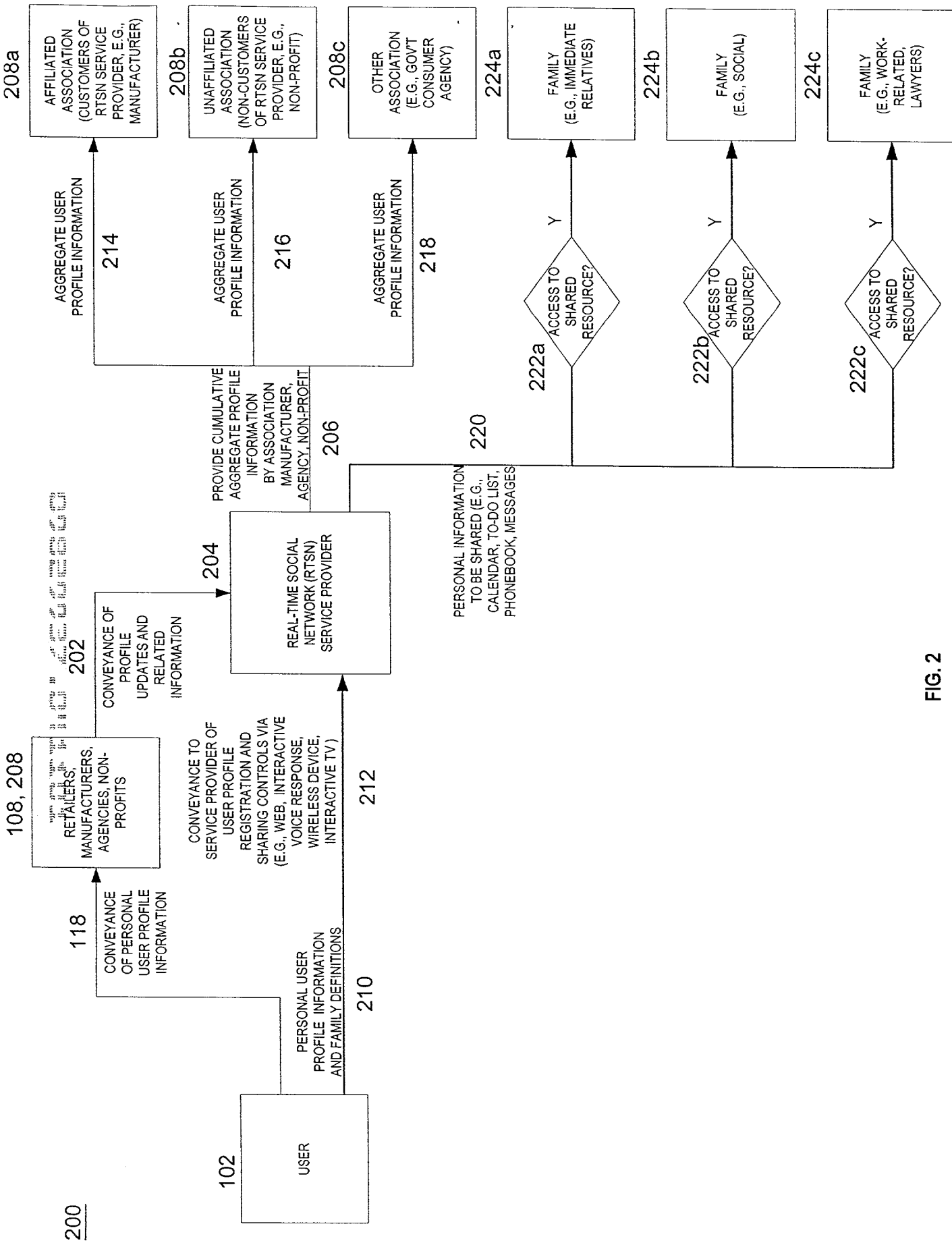


FIG. 2

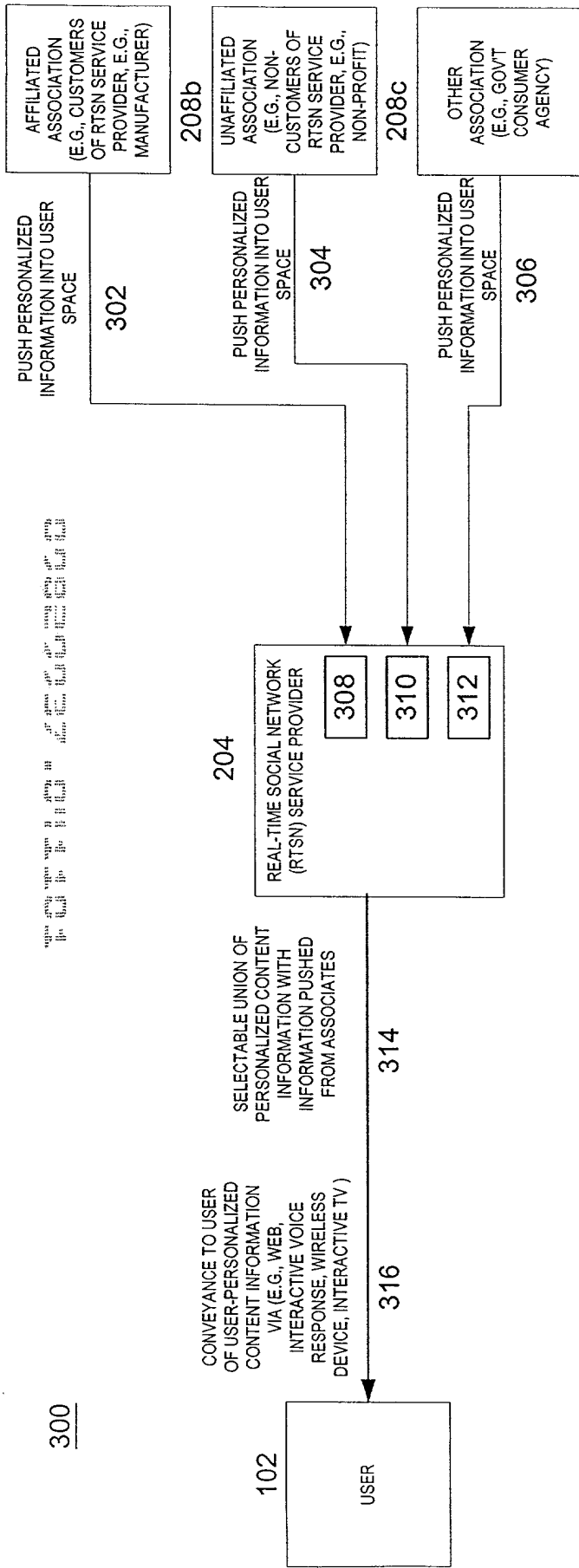


FIG. 3

FIG. 4

(from families)
Database Scraps

FAMILY 1
Us
Memo
Pack tonight so we can
get an early start on our
vacation tomorrow
Memo

FAMILY 2
Elliot Boy Books
Date: 06/00
Join us for: lates and book
singing. Douglas Adams
will be reading from his new
autobiography.

FAMILY 3
Mom & Dad
Postcard (Good News):
Linda's finally engaged!
The wedding will be some-
time in June of 2001
Postcard (Box voyage):

FAMILY 4
St Matthew's HS
Announcement:
Date: 10/00C
Don't miss our kid's car-
wash at the corner of 12th
St & Vire

418

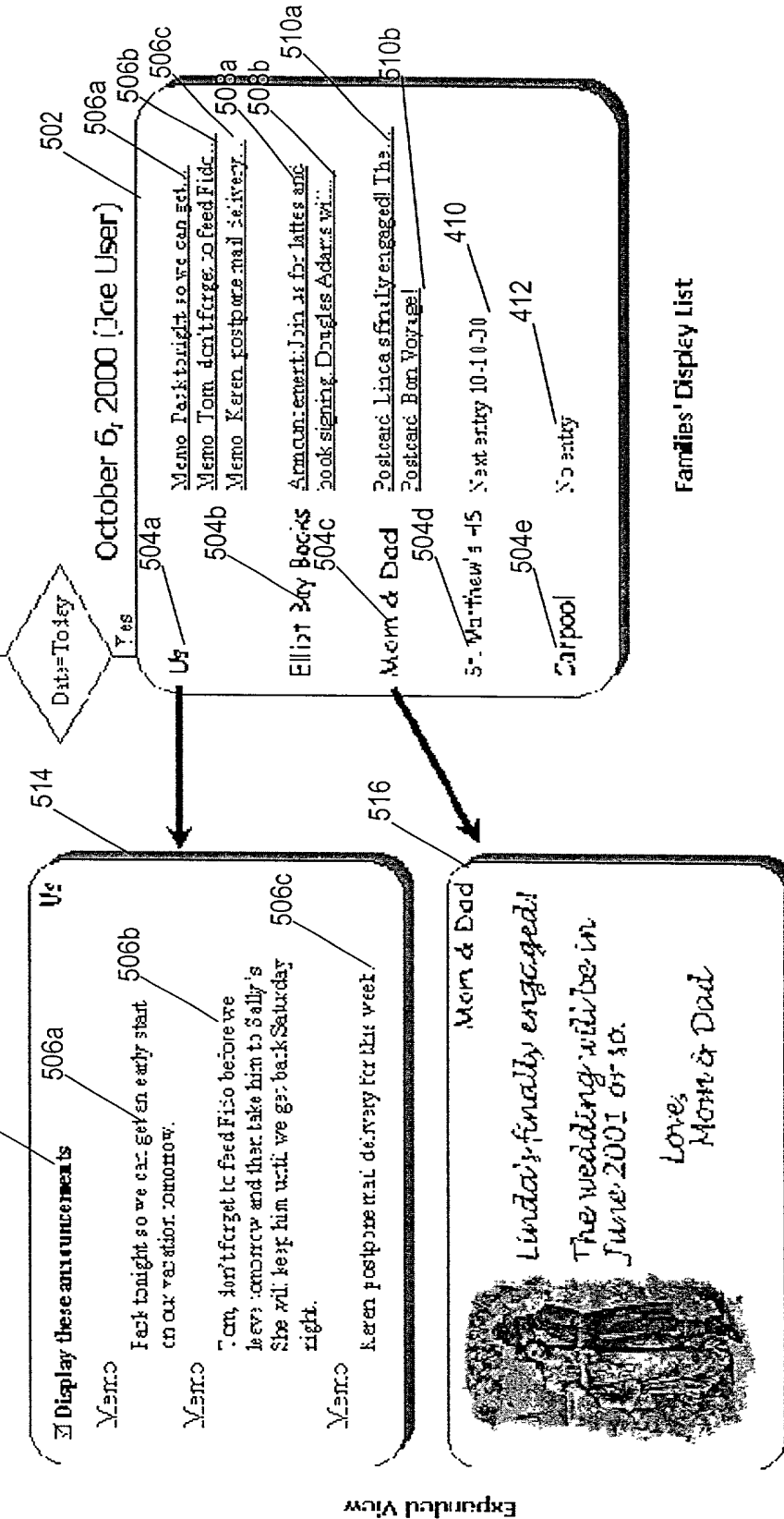
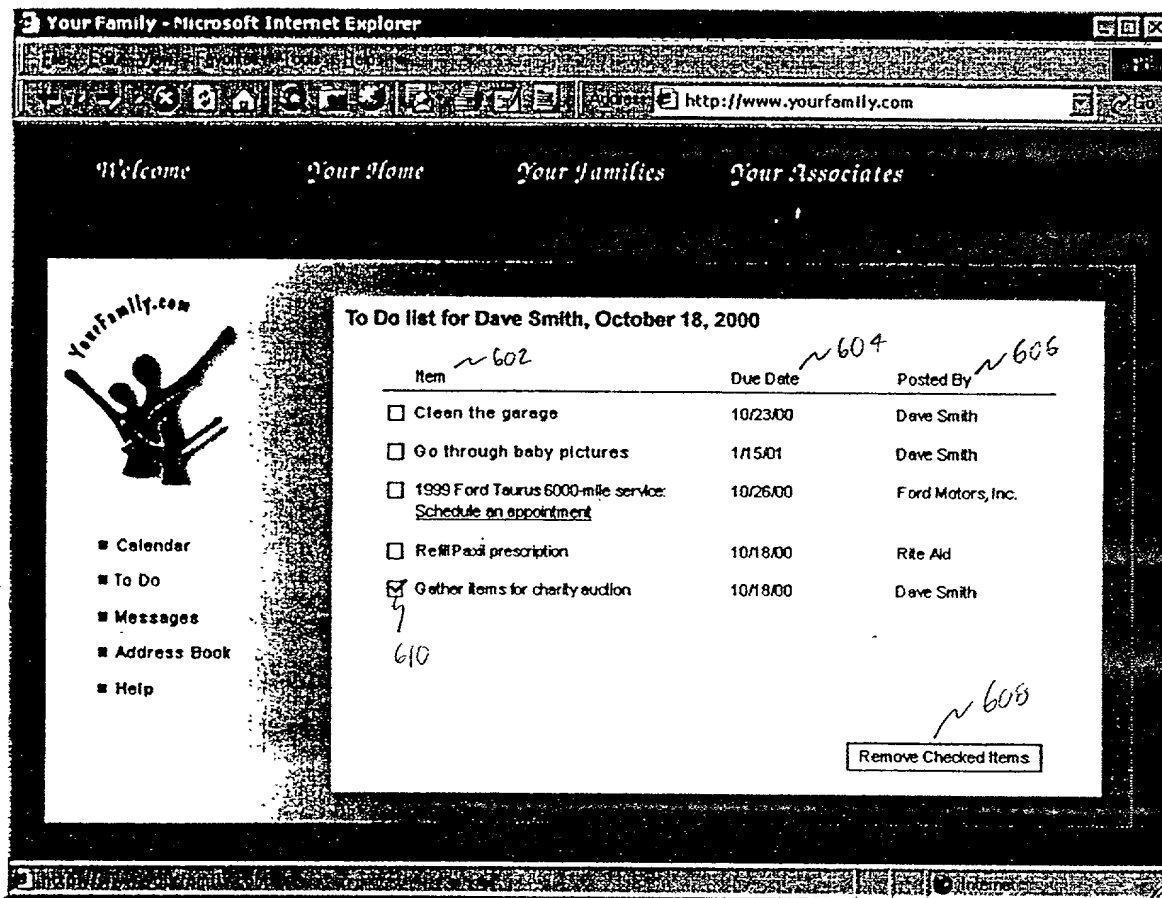


Figure 2. Families Data Flow Schematic

FIG.5

600



Your Home (To-do view)

FIG. 6

ASSOCIATE PROVIDERS (ASSOCIATES LIST VIEW)

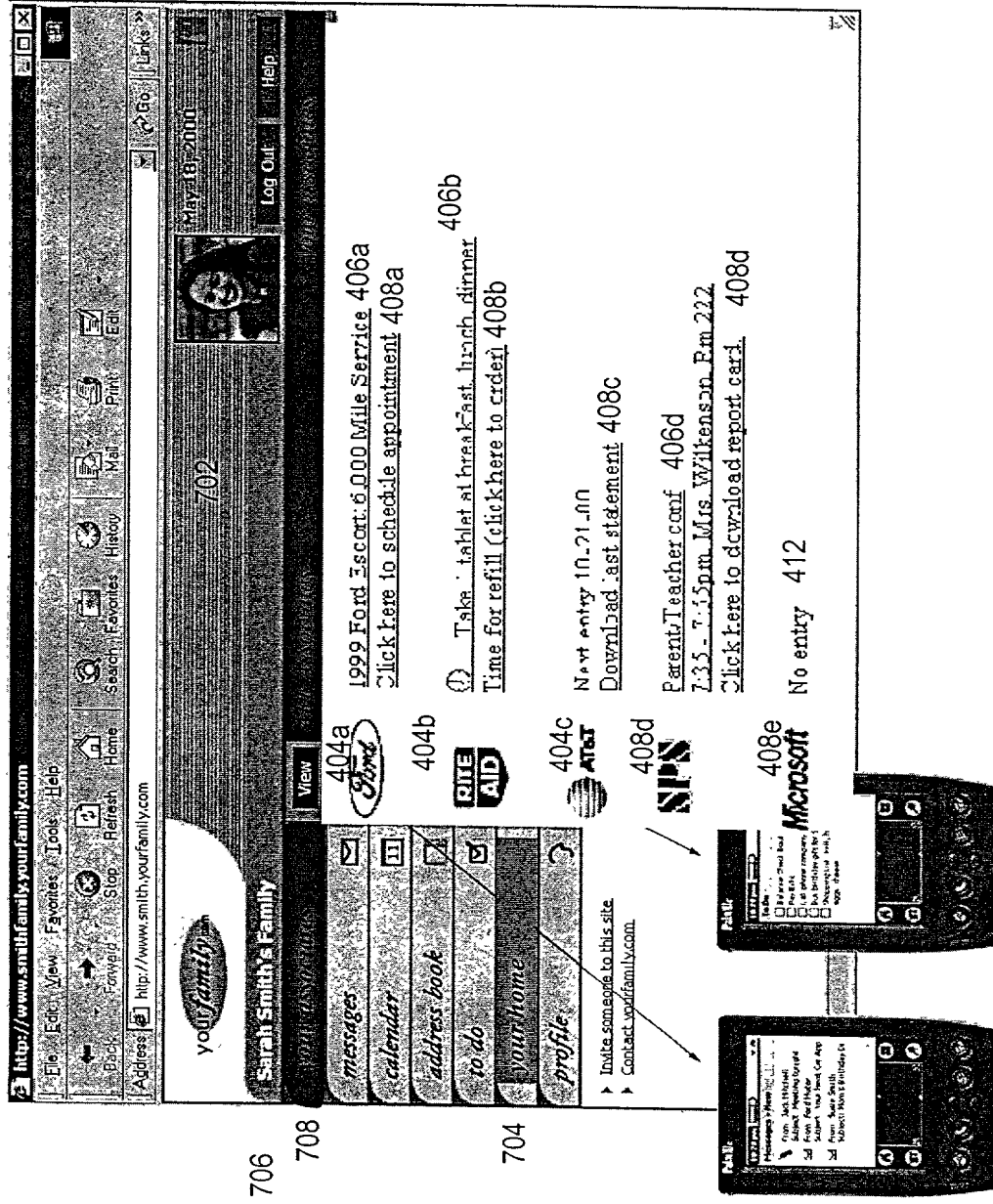


FIG.7

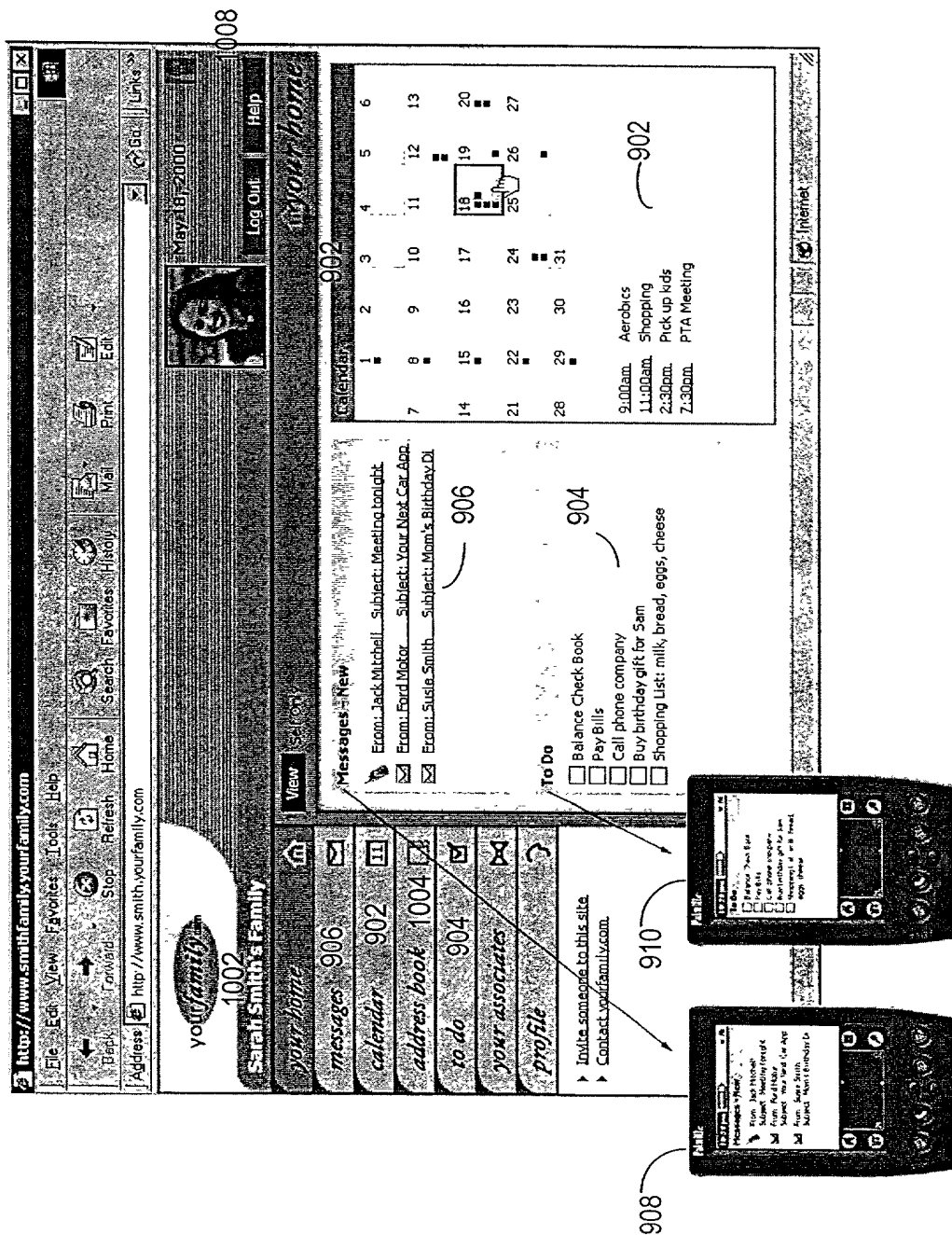


FIG. 9

Microsoft Outlook 2000

Calendar - Microsoft Outlook

File Edit View Favorites Tools Actions Help

New

Go to Today

Day

Work Week

Week

Month

Find

Day/Week/Month

Calendar

Folder List

Outlook Today - [David]

Associates (1)

Calendar (1)

Contacts

Deleted Items

Drafts (3)

Inbox (57)

Journal

Notes

Outbox

PocketMirror

Sent Items

Tasks (2)

Tuesday, October 10

PDT

7 am

8:00

9:00

10:00

11:00

12 pm

1:00

2:00

3:00

4:00

2 Items

October 10, 2000

September 2000

October 2000

November 2000

December 2000

TaskPad

Click here to add a new Task

Confirm Joe will pickup

6K mile service, 99 Ford Taurus

Pay property taxes 10/12

Rite Aid: Paxil refill due, 10/15

Check wife's dinner sch. Thur night

Get Mariner Tickets Mon night

FIG. 10

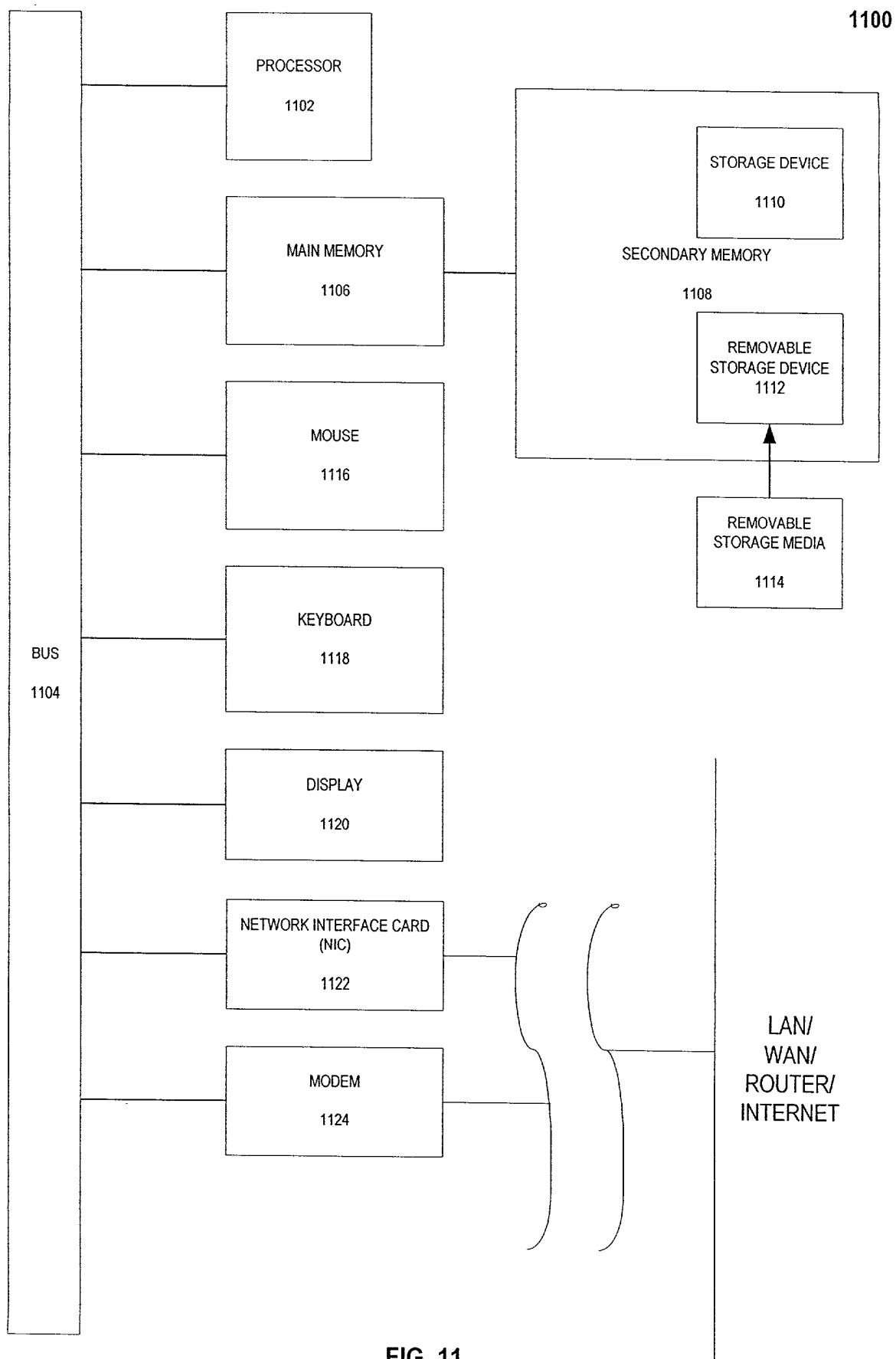



FIG. 11

BOLNICK, DAVID
206.527.1805

Seattle, WA
USA (001)




 AT&T March 22, 2000
7:21 pm (-8GMT)
7.20 seconds

FIG. 12

Microsoft Outlook 97

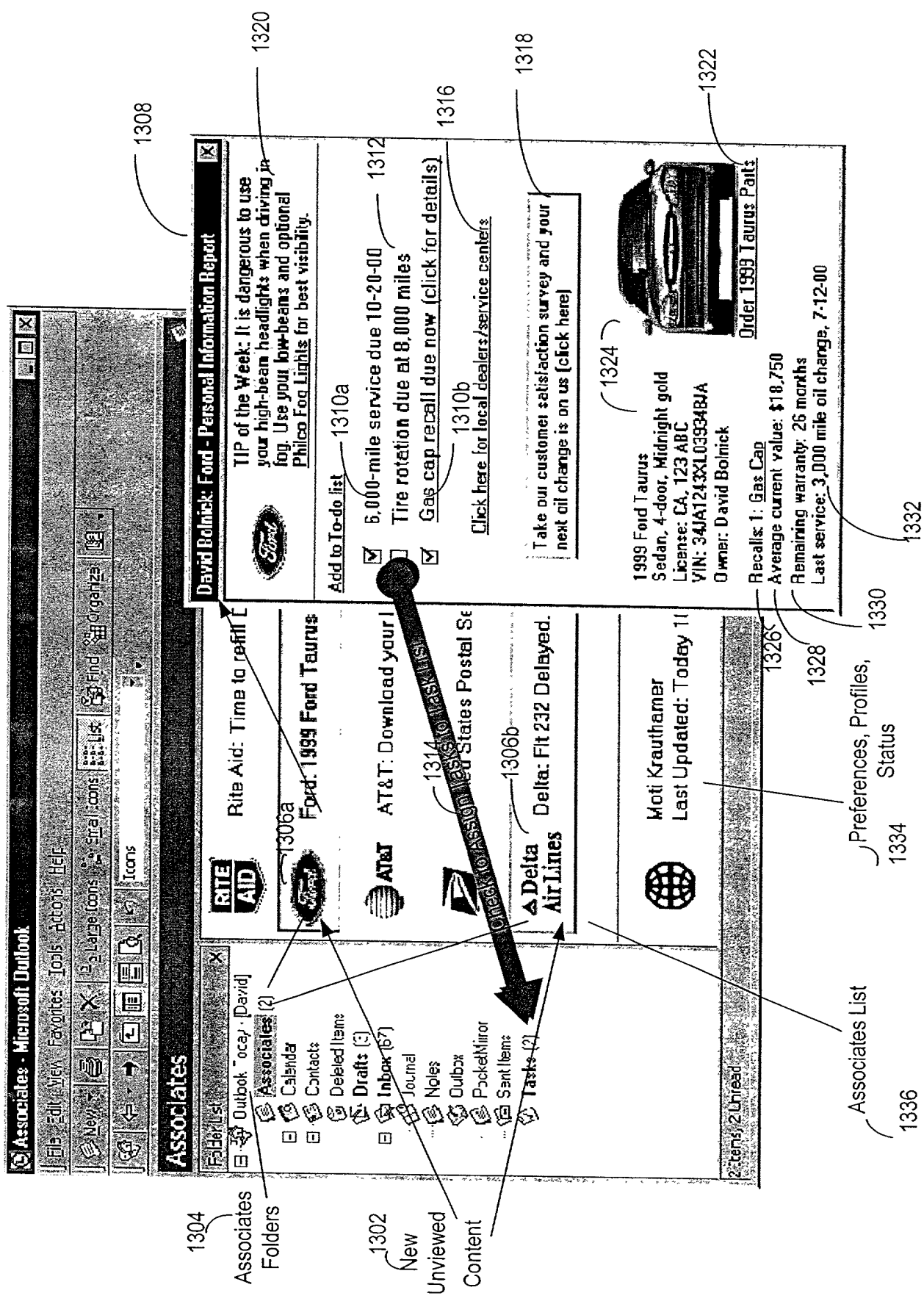
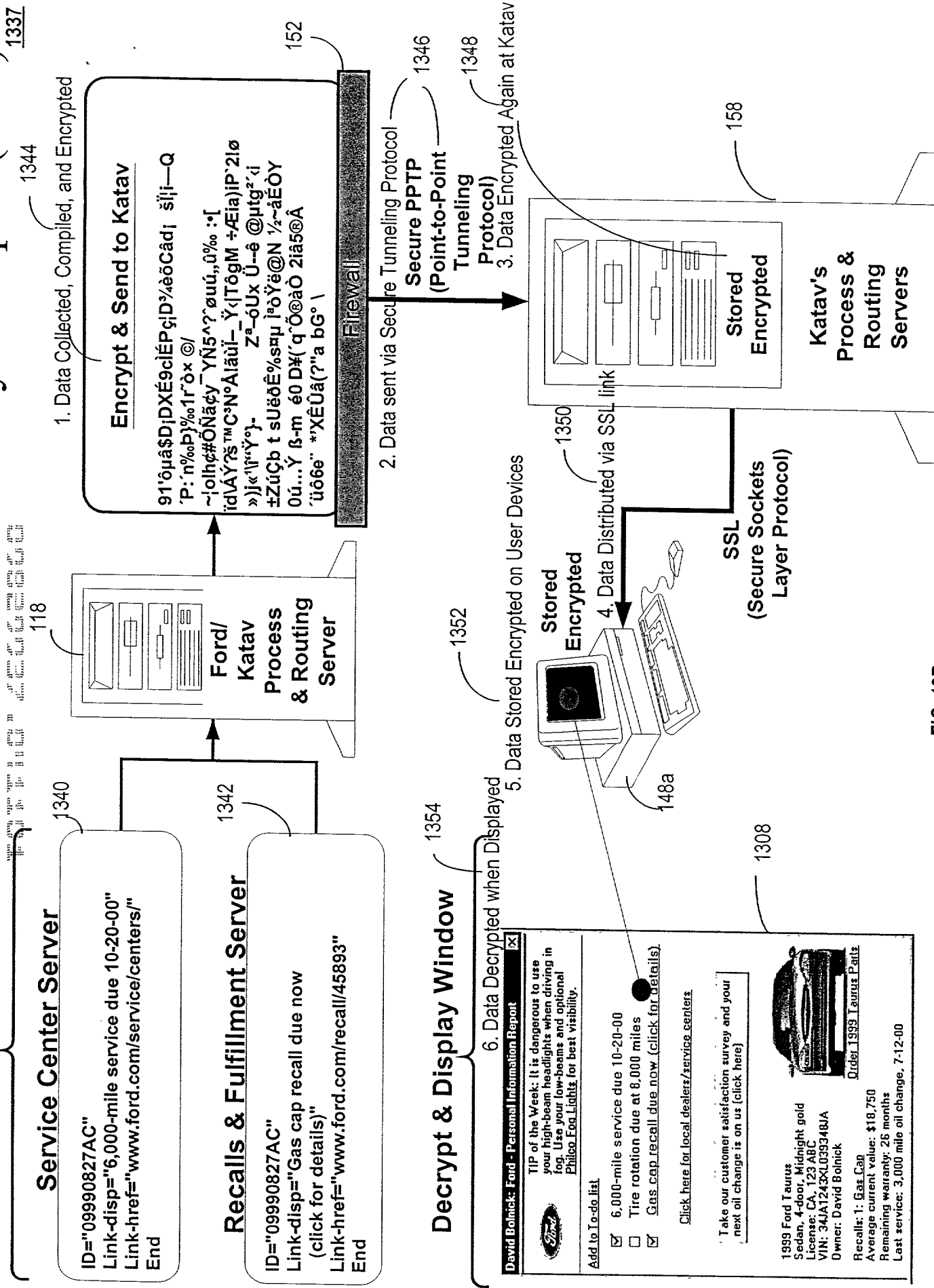



FIG. 13A



# UNITED	Mileage Plus Premier Executive
Last Updated: 8 April 2001, 9:00 AM PT	
David A Bolnick	
Account: 00349549	
Miles: 1,244,505 YTD 67,402 1K: 32,598	
Upgrade Bonus Miles: 5,000	
<input type="checkbox"/> Add All Flight Times to Calendar	
Sunday, April 8, 2001 : London to Seattle Ticket: 2081209344	
Call Flight Info	Stops Dist (mi) Seats
04 United Airlines	Boston 1162 pm First 3A
<input type="checkbox"/> 957	London New York (JFK)
Boeing 767	Vege
06 United Airlines	LAX 1:31 pm Non-stop 2543
<input type="checkbox"/> 8010	New York Seattle
Boeing 767	(SEA)
<small>See back of card for rules and regulations.</small>	
 London Flight 957 arrival delayed past New York connecting Flight 8010. Press to reschedule.	
Add to I-to-do list	Purchase miles Request upgrade Award travel
<input type="checkbox"/> Earn 5,000 miles by taking our customer satisfaction survey by the end of May 2001 (click here)	
<input checked="" type="checkbox"/> 2,500 Bonus Upgrade Miles to expire June 1	

UNITED Mileage Plus Premier Executive Last Updated: 8 April 2001, 9:00 AM PT																														
David A Bolnick Account 00349543 Miles: 1,244,505 YTD: 67,402 1K: 32,598 Upgrade Bonus Miles 5,000	1420 Add All Flight Times to Calendar																													
<input checked="" type="checkbox"/> Add All Flight Times to Calendar	Sunday, April 8, 2001: London to Seattle Ticket: 2081209344																													
<table border="1"> <thead> <tr> <th>Cal</th> <th>Flight Info</th> <th>Depart</th> <th>Arrive</th> <th>Stops</th> <th>Dist (mi)</th> <th>Segment</th> </tr> </thead> <tbody> <tr> <td><input checked="" type="checkbox"/></td> <td>United Airlines 657 Boeing 767</td> <td>9:00 am London</td> <td>0:152 pm New York</td> <td>Non-stop</td> <td>3565</td> <td>First 3A</td> </tr> <tr> <td><input type="checkbox"/></td> <td>United Airlines 237 Airbus A320</td> <td>5:00 pm New York</td> <td>7:00 pm Seattle</td> <td>Non-stop</td> <td>2543</td> <td>Catch Y 22A</td> </tr> </tbody> </table>	Cal	Flight Info	Depart	Arrive	Stops	Dist (mi)	Segment	<input checked="" type="checkbox"/>	United Airlines 657 Boeing 767	9:00 am London	0:152 pm New York	Non-stop	3565	First 3A	<input type="checkbox"/>	United Airlines 237 Airbus A320	5:00 pm New York	7:00 pm Seattle	Non-stop	2543	Catch Y 22A	<table border="1"> <thead> <tr> <th>Reservations</th> <th>Specials</th> <th>Summary</th> <th>CLOSE</th> </tr> </thead> <tbody> <tr> <td colspan="4"> Purchase miles Request upgrade Award travel </td> </tr> </tbody> </table>	Reservations	Specials	Summary	CLOSE	Purchase miles Request upgrade Award travel			
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Reservations	Specials	Summary	CLOSE																											
Purchase miles Request upgrade Award travel																														

Add to To-do list

☐ Earn 5,000 miles by taking our customer satisfaction survey by the end of May 2001 [Click here](#)

☒ 2,500 Bonus Upgrade Miles to expire June 1

Customer Support

Online Telephone Web

calendar
 1408
[david@hotmail.com](#)

Calendar	Tasks	Reminders	Notes	Options	Help
----------	-------	-----------	-------	---------	------

◀ Sunday April 8, 2001 ▶

Day	Week	Month	Year

Time	Appointment
9:00 AM (LT)	United F1 957 London (LHR) to New York (JFK)
10:00 AM (LT)	
11:00 AM (LT)	
12:00 PM (LT)	
1:00 PM (LT)	
1:31 PM (LT)	United F1 8010 New York (JFK) to Seattle (SEA)
2:00 PM (LT)	
3:00 PM (LT)	
4:00 PM (LT)	

Calendar
 1426
[david@hotmail.com](#)

Calendar	Tasks	Reminders	Notes	Options	Help
----------	-------	-----------	-------	---------	------

◀ Sunday April 8, 2001 ▶

Day	Week	Month	Year

Time	Appointment
9:00 AM (LT)	
10:00 AM (LT)	
11:00 AM (LT)	
12:00 PM (LT)	
1:00 PM (LT)	
2:00 PM (LT)	
3:00 PM (LT)	
4:00 PM (LT)	
5:00 PM (LT)	

United Ft 957 London (LHR) to New York (JFK)

mUnited Ft 237 New York (JFK) to Seattle (SEA)
CLOSE

New York (JFK) to Seattle (SEA) Sunday, April 8		1416		David A Bolnick	
Due to the delayed arrival of Flight 957, you will miss your New York (JFK) connection. Below are alternative flights to choose from. Please select one for immediate booking. Then press SUBMIT and wait for your confirmation.					
Select	Flight Info	Depart	Arrive	Availability	Stops Dist (mi)
G	United Airlines 237	6:00 pm New York (JFK)	7:52 pm Seattle (SEA)	Coach Y	Non-stop 2421
	Alaska 5320				
	United Airlines 7355	1:12 pm New York (JFK)	2:42 pm Washington (IAD)	Coach Y	Non-stop 228
C	Jetstream 41				
	United Airlines 219	5:23 pm Washington (IAD)	7:51 pm Seattle (SEA)	1st Y, Coach Y	Non-stop 2306
	Bonair 737-200				
	United Airlines 7 Bonair 737- 300ER	2:10 pm New York (JFK)	5:17 pm San Francisco (SFO)	1st Y, Biz Y, Coach Y	Non-stop 2589
	United Airlines 2194	8:30 pm San Francisco (SFO)	8:23 pm Seattle (SEA)	1st Y, Coach Y	Non-stop 878

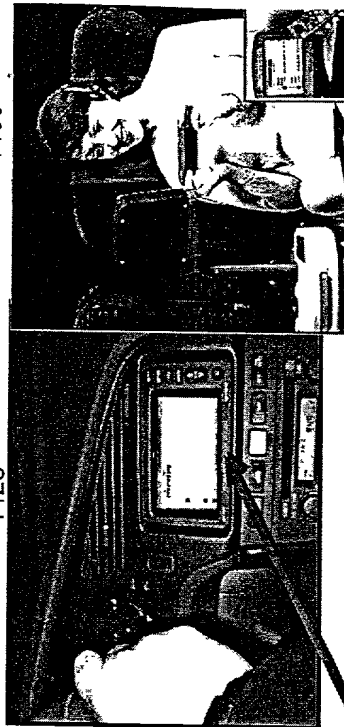



FIG. 14

1500

1510

Access on Windows Desktop

1506



delta.com

Reservations

Specials

Profile

Account: 034920AB

SkyMiles: 255,000 Miles

Tuesday, October 31, 2001

Depart: 11:00am Flt 232 SeaTac Airport

Check in: Required - 45 minutes before departure

Seat: 2B Reserved

Upgrade: First Class (Cleared), 2000 SkyMiles

Meals: Special (Vegetarian)

Make hotel reservation for Oct 31 travel

1512


1514


1516


PIR - Moti Krauthamer

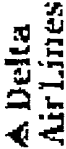
View Tools Help


Associates

 Rite Aid Awards Member

 AT&T Telecommunications

 United States Postal Service

 Delta Airlines: Exec Flyer

 Moti Krauthamer
Last Updated: Today 10:34am

1508

1504

1502

Display My Accounts

Update My Accounts

Properties

Exit

Start PIR - Moti Krauthamer 10:00 AM

FIG. 15

Access on (IFE) Portals...

1600

1602

1604

1606

UNITED

Personal Information Reports EDIT

Local Lookups
[Yellow Pages](#)
[White Pages](#)

RITE AID
Paxil--Take 1 tablet at breakfast, lunch, and dinner:
[Order a refill](#)

1999 Ford Taurus 6000-mile service
[Schedule an appointment](#)

[Download your last statement](#)

SPS
Parent/Teacher conference: 7:35
[Download your report card](#)

Personal Finance
MoneyCentral Stock Quotes
[Fidelity Investments](#) [Duke Online](#) [Patagon.com](#) [USA EXTRA](#)

Symbol	Name
\$INDU	Dow Jones Industrials Index
\$XAXX	Amex Composite Index
\$COMPX	Nasdaq Combined Composite Index
\$INX	S&P 500 INDEX

[update](#)

[News](#) [Market Report](#) [Top 10 Lists](#)

[get quote](#)

[get chart](#)

Find symbol

Sarah Smith: Rite Aid - Personal Information Report 418

☒ [Display events on my calendar](#) 1608

RITE AID
Customer number: 00002529573
Store: Wedgwood 206-555-1212
8432 - 35th Ave. NE 1610
Seattle, WA 98115

Rx 345878 Doxycycline 100mg 7 Caps 436c

Rx 340101 Diabinese 250mg 120 Tabs 436d

Rx History 1612

[Coupons & Store Specials](#) 1614

Rx 345878 Doxycycline 100mg 7 Caps 1616

Filled: 23 August 2000

Dr. M. Wellsby, MD Ph: 310-555-1212 1624

Take:  1618

1 cap in morning 1620a

Take with plenty of water 1620b

Consult your physician before discontinuing this medication 1622

* Refills: 1 Next due 10 October 2000

[Information on Disbiness](#)

FIG. 16

FIG. 17 is a screenshot of the MSN Messenger Service interface, showing a list of associated services and a list of associated members.

1704

MSN Today { 1706
1708
1710
MSN Tomorrow { 1712
1714

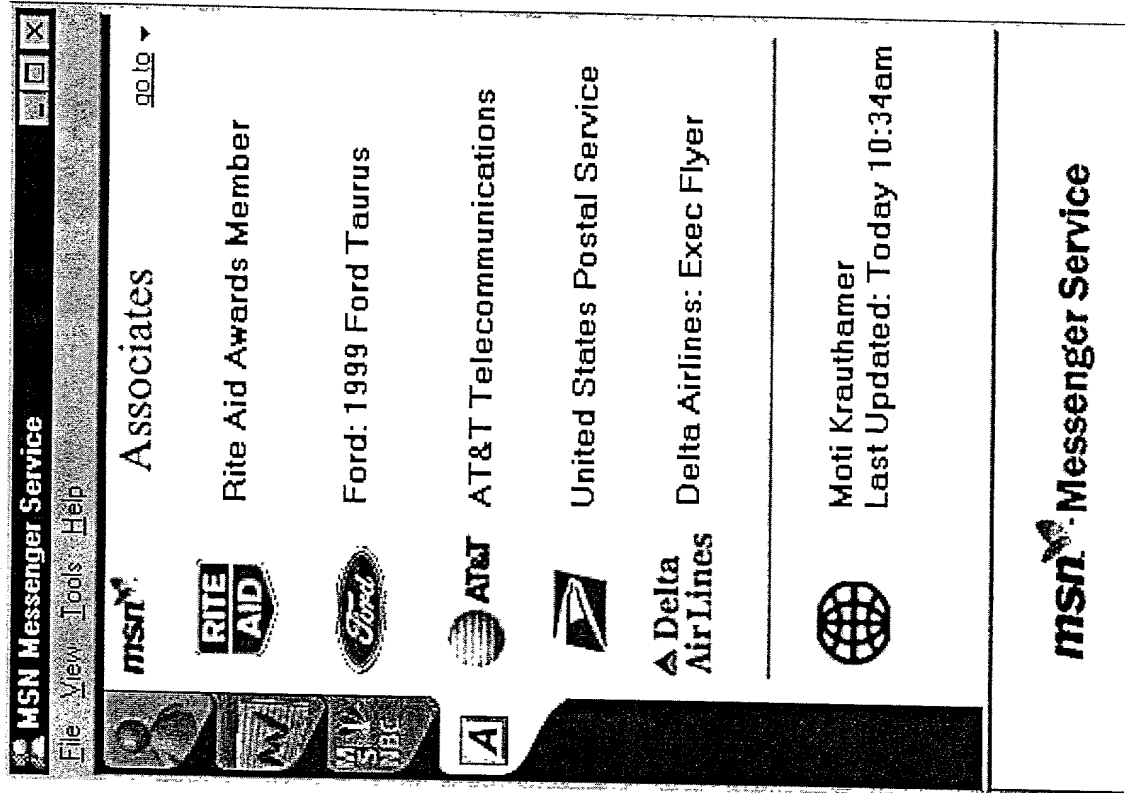


FIG. 17